



# TRANSPORTATION LRC

## LEVEL SIDEWALK PATHS THROUGH DRIVEWAYS

December 09, 2010



## CURRENT REQUIREMENTS

### Municipal Code Section 19.21.010

“sidewalks are to promote the mobility, health, safety and welfare of residents, property owners and visitors to the City of El Paso”



## SIDEWALK DESIGN

- Current design standards require a level sidewalk
- Existing City of El Paso sidewalk design standards for commercial/residential driveway sections provide for a clear pedestrian path of travel with a maximum 2% cross slope. The City Engineer may grant variances to sidewalk requirements.



## CURRENT REQUIREMENTS

Municipal Code Section 13.12.180

“Driveways shall be designed and constructed in such a manner that the safe and convenient movement across the driveways by physically handicapped persons, including those in wheelchairs, shall not be impeded”



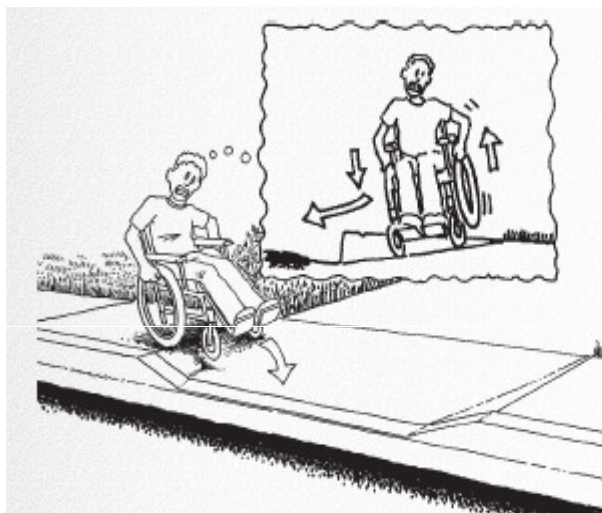
## CURRENT REQUIREMENTS

### Municipal Code Section 13.12.095

“The vertical transition of the driveway shall be designed to prevent contact of any vehicle undercarriage or bumper with the surface”



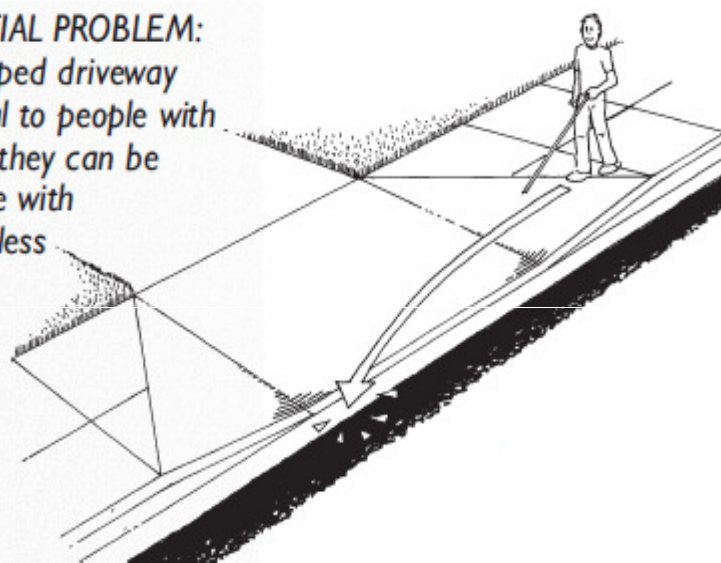
## PROBLEM SIDEWALK DESIGN



**Figure 5-2. PROBLEM:** This driveway design is not allowed by ADAAG. Driveway crossings without level landings force users to travel over the sidewalk flare. This design results in rapid changes in cross slope, which compromises balance and stability for people who use wheelchairs.

**Figure 5-5. POTENTIAL PROBLEM:**

Although gradually sloped driveway crossings are beneficial to people with mobility impairments, they can be problematic for people with vision impairments unless there is a detectable difference in slope at the edge of the street. If a visually impaired person veers toward the street and isn't able to recognize where the driveway ends and the street begins, they may enter the street without realizing it.





## PROBLEM SIDEWALK AND DRIVEWAY







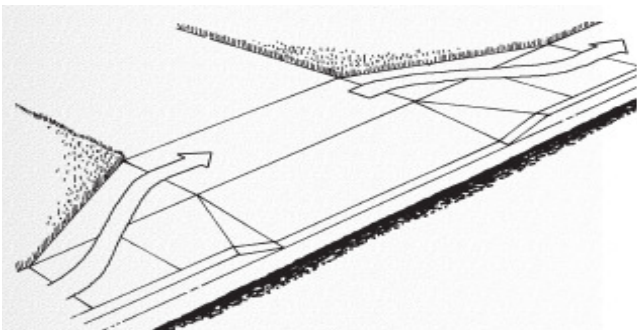
## PROBLEM SIDEWALK AND DRIVEWAY



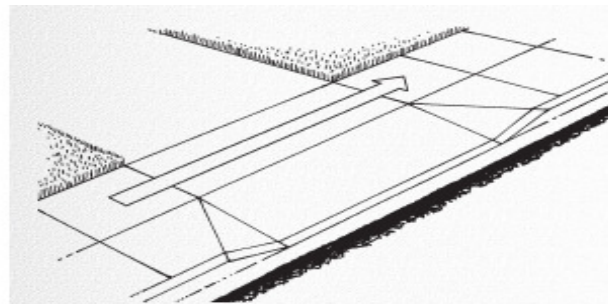




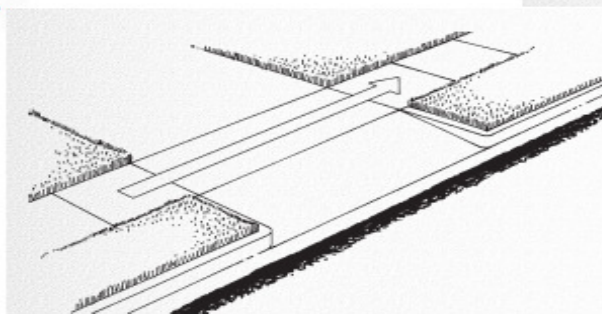
## GOOD SIDEWALK DESIGN



**Figure 5-6. GOOD DESIGN:** Securing additional right-of-way from the adjacent property is a good strategy for improving pedestrian access on narrow sidewalks.



**Figure 5-4. GOOD DESIGN:** Driveway crossings on a wide sidewalk corridor should be designed to include level landings.



**Figure 5-3. GOOD DESIGN:** Driveway crossings on sidewalks with planting strips should be designed with level landings and returned curbs. Using returned curbs instead of flares benefits pedestrians by forcing motorists to enter the driveway crossing at more of a right angle and thus at a slower speed.



## GOOD SIDEWALK DESIGN





## GOOD SIDEWALK DESIGN



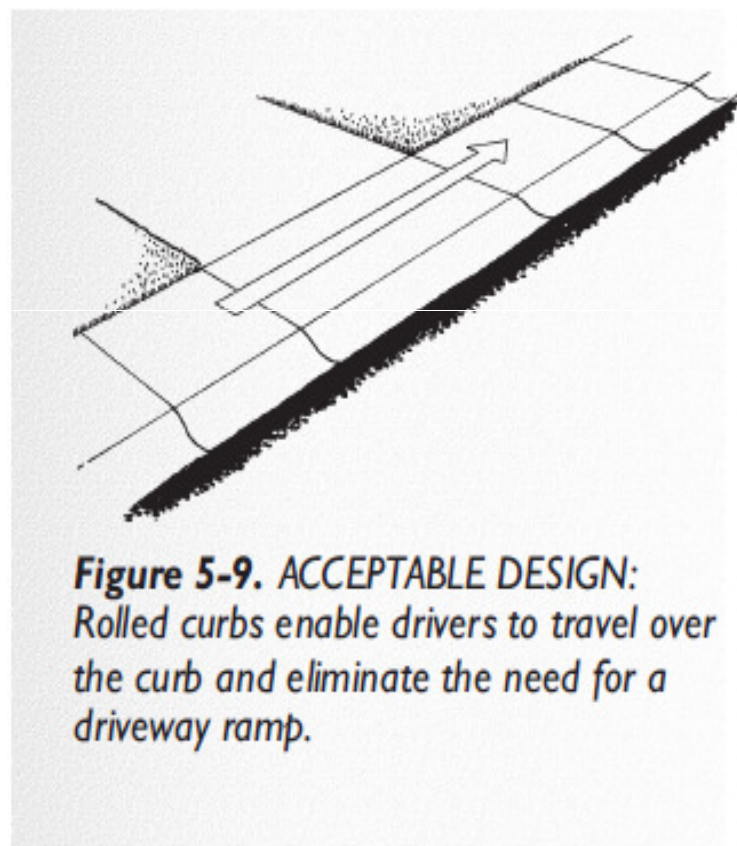
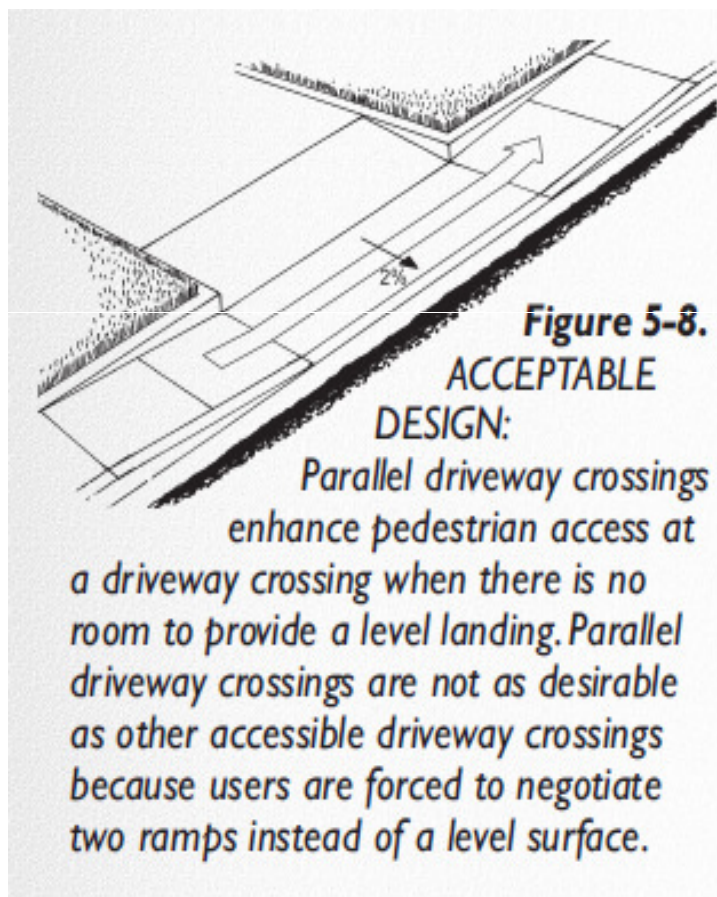




## AVAILABLE OPTIONS TO DEAL WITH SPECIAL CONDITIONS

- Parallel driveway crossings or rolled curbs are acceptable designs to solve the vertical transition of a driveway and provide a level pedestrian zone where the existing sidewalk (ROW) is narrow
- Jogged driveway crossings are a good alternative but may require the purchase of right of way

## ACCEPTABLE SIDEWALK DESIGN







## POOR APPLICATION OF SIDEWALK DESIGN OPTION TAYS ST.





## RECOMMENDATIONS

- Strict adherence to the City of El Paso Design Standards for Construction regarding sidewalks and driveways for public and private projects
- Enhance permit and design review, inspections and enforcement of construction of sidewalks and driveways



## RESOURCES

- FHWA – Best Practices Design Guide – Designing Sidewalks for Access  
<http://www.fhwa.dot.gov/environment/sidewalk2/pdf.htm>
- City of El Paso Design Standards for Construction –  
<http://www.ci.el-paso.tx.us/engineering/>